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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/194,598	11/30/1998	LOUIS DELESALLE	065691/0145	3390

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EXAMINER

KRUSE, DAVID H

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 01/14/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/194,598

Applicant(s)

DELESALLE ET AL

Examiner

David H Kruse

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above claim(s) 13, 14 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

1. This Office Action is in response to the Response and Remarks filed 6 November 2001.
2. The rejection of claims 12 and 15-17 under 35 U.S.C. § 102(b) as anticipated by Rambaud (1994) is withdrawn in view of Applicant's amendments to the claims.

Election/Restrictions

3. Claims 13, 14 and 19 are withdrawn from further consideration pursuant to 37 CFR § 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 14 filed 6 November 2001 in response to the Office Action mailed 19 June 2001.
4. This application contains claims 13, 14 and 19 drawn to an invention nonelected without traverse in Paper No. 14. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR § 1.144). See MPEP § 821.01.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

7. Claims 12 and 15-18 remain rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is repeated for the reason of record as set forth in the last Office action mailed 19 June 2001. Applicant's arguments filed 6 November 2001 have been fully considered but they are not fully persuasive.

Applicant argues that Applicant need not understand or disclose the mechanism by which orf 522 alters fertility (paragraph spanning pages 2 and 3 of the Remarks). The Examiner concedes this argument.

Applicant argues that the claimed plant genome comprises the sunflower orf 522 sequence or a sequence with at least 50% homology to that sequence and that Example 2 details PCR analyses that demonstrates the presence of orf 522 in male sterile plants and the absence of this sequence in all normal chicory plants (at the top of page 3 of the Remarks). The Examiner responds that the claims are not so limited to chicory plants, nor are the claims limited to a sunflower sequence, but claims a recombinant plant genome comprising a male-sterility-conferring sequence with at least 50% homology with the sunflower orf 522 sequence, wherein said nucleotide sequence has the PCR primer sequences of SEQ ID NOS: 1 and 2. Because Applicant appears

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to lack understanding of the mechanism by which the sunflower orf 522 sequence confers male sterility in a plant, it is unclear from the instant specification how one of skill in the art would have made or identified a male-sterility-conferring sequence with at least 50% homology to the sunflower orf 522 sequence without undue trial and error experimentation. See *Fiers* 25 USPQ 2d (CAFC 1993) at 1606 that states "[a]n adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it; what is required is a description of the DNA itself".

8. Claims 12 and 15-18 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for a male sterile 'chicory' plant comprising the sunflower orf 522 sequence wherein said sequence confers male sterility and said plant is produced by protoplast fusion between a sunflower protoplast comprising said sequence and a 'chicory' protoplast, does not reasonably provide enablement for any recombinant plant genome comprising a male-sterility conferring sequence with at least 50% homology to the sunflower orf 522 sequence. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. This rejection has been modified from the rejection under 35 U.S.C. § 112, first paragraph, for enablement as set forth in the last Office action mailed 19 June 2001. Applicant's arguments filed 6 November 2001 have been fully considered but they are not persuasive.

Applicant argues that the specification describes the successful production of CMS plants by protoplast fusion according to a modification of the method of Kao, which resulted in the production of a CMS plant with a chicory phenotype (page 3, last paragraph of the Remarks). The Examiner responds, pending claim 12 is not limited to a plant having a chicory phenotype, only one comprising at least one chicory gene and a nucleotide sequence conferring male sterility with at least 50% homology with the sunflower orf 522 sequence. To this point, applicant has not taught a recombinant plant genome other than that produced by protoplast fusion with a chicory derived protoplast. Araya *et al* teaches that the state of the art in transferring a cytoplasmic characteristic from one plant genome to another, such as by protoplast fusion, is unreliable or unreproducible, suggesting that extensive guidance would have been required for one of skill in the art at the time of Applicant's invention to practice Applicant's invention as broadly claimed (see Araya *et al*, last paragraph of column 1 and first paragraph of column 2). In reference to claims 15-18, because Applicant has only taught a recombinant plant with a chicory phenotype comprising the sunflower orf 522 sequence having a male sterile phenotype, has not taught how to identify within the sunflower orf 522 sequence what is critical in conferring a male sterile phenotype in a plant with a chicory phenotype and has not taught how to make or identify a male-sterility-conferring sequence with at least 50% homology with the sunflower orf 522 sequence, undue experimentation would have been required for one of skill in the art at the time of Applicant's invention to practice Applicant's invention as broadly claimed.

Claim Rejections - 35 USC § 103

9. Claims 12 and 15-18 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Rambaud *et al* (1994) in view of Rambaud *et al* (1993) and Laver *et al* (1991). This rejection is repeated for the reason of record as set forth in the last Office action mailed 19 June 2001. Applicant's arguments filed 6 November 2001 have been fully considered but they are not fully persuasive.

Applicant argues that none of the cited references disclose or suggest a polynucleotide sequence as shown in SEQ ID NOS: 1 and 2 (page 6 of the Remarks). The Examiner directs Applicant's attention to Figure 3 on page 188 of the Laver reference, right column, where SEQ ID NO: 1 is taught at nucleotides 1958-1981 and the complement of SEQ ID NO: 2 is taught at nucleotides 2276-2301 of the lower, male sterile encoding, sequence. Hence, because Rambaud (1994) teaches how to make a male sterile chicory plant by protoplast fusion with a male sterile sunflower, suggesting on page 351, left column, lines 3-10, that any male sterile sunflower would be sufficient, and Laver teaches a male sterile sunflower plant comprising a male-sterility-conferring sequence with at least 50% homology with the sunflower orf 522 sequence having the sequences shown in SEQ ID NOS: 1 and 2, it would have been obvious to use the teachings of Laver to modify the teachings of Rambaud at the time of Applicant's invention.

Conclusion

10. No claims are allowed.

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11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (703) 306-4539. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (703) 306-3218. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the William Phillips whose telephone number is (703) 305-3482.

David H. Kruse, Ph.D.
11 January 2001

DAVID T. FOX
PRIMARY EXAMINER
GROUP ~~138~~ 1638

